

On the ontological status of Nouns (Are nouns ontologically neutral?)

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It is often assumed, and something similar has been assumed for thousands of years, that the most basic kind of noun (N) is one that denotes a basic level category of objects, that the most typical Ns are Ns like "cat", "chair", "tree", "stone", and that other kinds of nouns have less basic meanings, in some sense. The problem is, in what sense?

If we take this as written, then even nouns like "water", which denotes a kind of substance, "toy", which presumably denotes a much broader category of objects, including dolls, toy cars, guns, etc. each of which has its own basic level term, and its own recognition criteria, or "thing", which presumably denotes a very general category, not at all a basic level category (BLC), "brother", which denotes a person in a particular kinship relation to another person, "mamma", which denotes a specific

individual, or, more generally, another kinship relation, "Johnny", are less basic, less typical. And nouns like "jump", which denotes an action, "game", which denotes a kind of activity, "noise", which denotes, say, a kind of event, and, in fact, thousands of nouns of English, including "category", "essence", "country", "street", and many others, are atypical nouns. This raises certain problems.

For one thing, most, perhaps all, of the world's languages have nouns corresponding to all these subtypes, and, in fact, it is tempting to say that anything that can be denoted by any kind of word can be denoted by a noun, in some language, or even in most languages.

Furthermore, in most languages the class of nouns is the largest: for instance, there are tens of thousands of nouns in English, and, I would guess, far fewer verbs (less than ten thousand?) even fewer adjectives, and so on.

In fact, it is not clear that there are any HL

(human languages) at all where noun is a closed class, although there are some, a minority perhaps (Farsi, Kalam, Kobon, etc.) where verbs are a closed class, and a perhaps larger number (Bambara, Japanese?, where adjectives are a closed class). If we restrict our search to formally simple nouns (f.i. "book", but not "handbook" or "armchair") there are still, in most languages, many thousands, but there may be a few languages (Navajo?) where there is just a small, rather closed class: most nouns in Navajo, I think, are derived, mainly from verbs. Interestingly, where nouns, or even formally simple nouns, number in the thousands, many of these are like the purportedly atypical nouns mentioned above: they denote entities of other classes than objects, such as classes of substances ("juice", "snow"), actions ("walk", "punch") events ("storm", "hurricane") places ("lake", "country", "city", "planet", "spot", "place") kinship or other relations ("cousin", "friend", "enemy", "foe"), mental events or states ("idea", "love", "shock") entities

of other, perhaps dubious, ontological types ("shadow", "trace", "god", "spell", "gap", "hole").

Among the empirical questions that seem relevant to improving our understanding of the ontological status of nouns, are the following: Are there *any* O-types (ontological types) that are not lexicalized as nouns, in some, or all languages?

Are there any O-types lexicalized as nouns, such that the nouns of these O-types are learned, and always, or usually, produced, before others?

Note that if even one of the event nouns of English (say "game", or "storm") is frequently learned/uttered as one of the first hundred nouns, that could raise problems both for the claim that the O-type *event* is cognitively harder, or less natural, or comes later, or perhaps even is less important, for a young child, than, say the O-type *thing*. And if it was observed that event nouns, or action nouns, in all languages that have them, are acquired later

than event *verbs*, and in particular verbs expressing the same event or action, that would provide some support for the claim that these O-types are more naturally expressed as verbs than as nouns (modulo other possible explanations, such as different frequencies of the nouns and verbs in child directed speech)

The issue of language-dependent conceptualization

It is conceivable that there are both conceptual and lexical constraints at work. For instance, it may be that certain concepts are more strongly, or more complexly, language-dependent (LD) than others. Thus, abstract concepts like "relation", "ontology", and other culturally specific, often explicitly taught concepts like "synonym", "benediction", "luck", "subtraction", "percentage", "solstice", and thousands of others, should come later, if they require a lot of basic language, and cultural

knowledge, to be grasped, and even more so if they require cognitive maturation of other kinds, say of the representational resources (RRs) for which the prefrontal cortex plays a crucial role. It may also be the case that certain concepts require much more perceptual experience than others (as presumably even a non-LD version of OAK would be acquired only by sufficient exposure to oaks, and a non-LD version of CANINE -assuming such a concept is possible without language- might require particular kinds of experience of various kinds of canines, say dogs, foxes, wolves, and experience of non-canine mammals, such as squirrels, cats, rabbits, for the child to notice the visual and behavioral characteristics that the canines have in common and that distinguish them from the non-canines, and for these to become salient enough for the child to create the concept CANINE).

Presumably such harder concepts cannot be among the first for which words are learned, but that calls for corroboration.

An alternative to the other biases:

Among the biases people have considered are the following:

(i) a pure noun bias (cf. Gentner, but see below): on this view, the language learner (LL) prefers to use nouns rather than any other lexical class (LC), in a pure form, this seems to predict (wrongly) that the O-type of the N would not matter, it would depend on what nouns LL has heard;

(ii) a concrete object bias: on such a view, at the one word stage, at least, LL prefers to talk about or refer to, concrete objects, and it so happens, for other reasons, that in all HLs these can be lexicalized only as nouns. This could be taken to predict that the LL would never be able to make predications, without language, or, at least, that at the start of the multi-word stage LL's lexicon of Ns would be much larger than his/her lexicon of other L-types, and should consist mainly of nouns for concrete objects, depending on how

strong the bias is, but, if this theory is made more precise, by including a specific prediction about the strength of the bias, say that 75% of the vocabulary learned at the single word stage consists of concrete nouns, that should also predict what utterances should look like at the onset of the multi-word stage, say there should be a much smaller set of verbs or predicate words of any type (assuming no V or A can denote concrete objects) than of nouns;

(iii) a concrete noun bias (this seems closest to Gentner's early proposal): on this view, there is a bias both at the conceptual level, say for the O-type concrete object (say at the BL), and at the LC level, for the class of nouns

I suggest the following alternative:

(iv) at the prelinguistic stage, there is a strong bias for concrete conceptualizations (perhaps, even, on a particular instantiation of this idea, for conceptualizations corresponding to predications, or thoughts, such as one that would be expressed by a concrete noun plus a

concrete predicate). For this proposal to be made more falsifiable, we need to spell out what the set of concrete conceptualizations includes (for instance, a desire to be picked up by mother, but not a desire for mother to write a computer program, or even to count to ten or set back the clock, since those concepts are unavailable to the infant), and LL "looks for", hence learns, lexemes that concern, are heard in, preferred situations, whether they are N, V, or prepositions. Thus the infant might acquire rapidly a lexeme such as, for picking up, a word like "kuch" (meaning carry on back, in Tzotzil) or a preposition or particle meaning something like "up", or a verb meaning "pick", or a N meaning "back" or "arm", depending on the language and the CDS (child-directed speech). The prediction should be that, if more nouns are heard in such situations than verbs or adjectives (which may be a subset of the total nouns the caregiver uses in the child's presence) then more nouns will be learned, if not, not.

The claim need not be that the LL is only capable of "complete" or proposition-like thoughts, (what we might call "propositionoids") say predicate + argument conceptualizations (as is sometimes proposed, along with the idea that these are unanalyzed, "holistic", units), it could be proposed that LL has multiple O-types available, including concrete object, substance, people, action, state, direction concepts, and is able to learn lexemes for each type, but that LL is not able to represent only a concrete object in isolation, or only an action: perhaps LL can only have a representation combining an object concept with a predicate concept.

Another variant, perhaps more plausible, would propose that LL *can* have a conceptualization focused exclusively on an object, say mommy, or a toy, and can also have a conceptualization of the predicative type (object + action/state, such as mommy laughing, or toy broken), but is not able to have a purely predicative conceptualization, or even a concept of an

action, in isolation. This would imply, presumably, that, in the single-word stage, when LL utters a noun alone, it can either express an object conceptualization, or a complex predicate+argument conceptualization (thus "toy" could either be a speech event of naming something as a toy, or a request for a toy, equivalent to "I want a toy" or "bring a toy", or "that's a/my toy"), while if LL utters a verb or adjective alone, it can only express a predication, such as "bring" for "bring me that toy", or "broken" for "the toy is broken". It would be incumbent on the researcher to determine criteria for deciding what kind of utterance LL has produced, presumably based on contextual plausibility.

One minor problem with this propositionoid proposal is reminiscent of that raised by Quine: it is not particularly plausible, if LL can focus on an object like a chair or dog, that it cannot also focus on water flowing from a faucet, or snow, or mud, or other substances. To respond

to this worry, the original proposal can be modified, for instance to the claim that LL can represent not just propositionoids, but also "concrete" entities of other sorts than objects, such as substances, and perhaps noises, smells, etc. After all, among the sentences one can express in all HLs are sentences like "there is snow", "there is water", and every language allows utterances like "water!", or "aha, snow", "a noise!".

It's not clear how different "snow is falling" which, on one common account, combines the "concepts" SNOW and FALL, really is from "aha, snow!", which combines the concept SNOW with an expression of surprise.

Furthermore, it is not clear how to determine whether the infant can have two distinct concepts, say one for snow the substance, one for the event of snow falling, and whether, even if the infant has both "concepts", when the infant sees snow falling, it can have either one or the other concept. The crucial point about most verbal and adjectival concepts is that they

do not really make sense alone, except intentionally: there can't be falling without something that falls, whiteness without something that is white. Thus even if a mind could have a distinct concept for the event of falling, it would presumably have access to the fact that falling implies the existence of a faller, whether or not it is currently representing the faller along with the falling, or not.

This dependence is observable with all nouns that express actions, states, events, etc. Thus, the "full" sentence:

There is falling.

entails that there is something, whether substance or object, that is falling. Likewise

There is whiteness.

entails that there is something that is white, an object or substance, not a noise or event. And
There was an accident.

entails the existence of concrete entities like objects, substances, etc. (Can an accident involve just a noise, and no entity producing the noise?)

If it is true that LL can represent in isolation only entities like stones, water, and perhaps noises, smells, say entities that are directly perceptible, but cannot represent accidents, falling, moving, whiteness, without concurrently representing what it is that is falling, white, or involved in an accident (footnote: it is of course debatable whether an infant can have a concept as complex as ACCIDENT) that would be something more than a "bias": it would be a limitation on what the content of a representation can be.

There can be little doubt that an infant, a chimpanzee, or even an adult human without language, has limitations on what it can represent, compared to a normal, language-equipped older human. The real questions are: what is the nature of these limitations?, and how much does enculturation, and language, add to our representational, or conceptual, capacities? Is, in fact, the capacity to represent an event or state without representing the entity involved a conceptual ability that requires language?

